about all this sort of advertising distinct from the advertising itself, of sufficient interest to carry the load of advertising that you put on its back; otherwise it is almost invariably immediately thrown away.

The calendar has been used as an implement of advertising to such an extent that a calendar must be much more than a mere calendar to make it good advertising; that is, it must be a particularly handsome calendar. The ordinary adult does not care to have his walls entirely plastered with these reminders of the unfortunate fleetness of time. If he gets seven or eight he will pick out one or two of the prettiest, and the rest soon find their way back into the paper mills to be ground up again. By far the best advertising calendar is the one that not only has a handsome design, but a special design that particularly fits your individual case; one in which your advertising is worked in as an integral and artistic part of the general design. To take a handsome calendar and lug in your advertising by the heels is to spoil both the art of the calendar and the effect of the advertising. Of course, a special design means increased expense, but it is well worth it where you expect to distribute any considerable number.

THE BEST METHOD.

All this special sort of advertising, by books, circulars, cards and calendars, really requires for successful results a special advertising man, one familiar with the general subject of advertising, a man fertile in ideas, of artistic temperament and sufficiently acquainted with the work of the printing office and the art of lithography to know how to get the largest results for the outlay of money. To advertisers who do not employ a specialist the daily newspaper is by far the safest and most certain method of reaching the public. It should not be difficult for any intelligent man who has lived for any time in a community to know just what papers will best serve him as advertising mediums. It isn't at all necessary to examine the books in the newspapers' counting room or to get their affidavits on circulation. A paper that you read yourself and that you respect, that your neighbors read and respect, and that you know to be widely read and respected, you can safely rely on as a satisfactory medium for reaching people of your own kind. You can easily tell from general observation what papers reach the great, comfortable, purchasing middle class, what paper caters to the opulent few and what paper is most widely taken in the humbler strata of society. Ordinarily the newspaper that is most widely taken by the average well-to-do citizen, who is neither a millionaire nor always looking for a job, is the advertising medium that you want. There are in some of the large cities some weekly "society" papers—so-called—which before the advent of the special Saturday or Sunday editions of the daily paper cut some little figure, but these special editions of the daily paper have of late years almost entirely usurped the former field of the "society" weeklies, with the effect of greatly reducing their circulation and their value as advertising mediums.

In a general way, if you don't want to waste your advertising appropriation, avoid all schemes presented to your attention by plausible strangers and shun all publications concerning which you know nothing except what you may be told by an urbane and voluble solicitor. The advertiser who sticks to the solid, substantial and influential papers and fills his space judiciouly is as sure of getting returns as the boy who clubs a loaded chestnut tree the morning after a frost.

JOHN P. LYONS.

(Copyright, 1896.)

AFTER DIAMOND DUST.

British Scheme to Dig Into the Graves of the Sultan's Victims.

New York Times.

At least one English paper puts news considerations above those of business. This it has demonstrated by revealing the details of a most remarkable scheme, a scheme the originators were trying to keep quiet for the present, and of which they had intended to reap all the profits, leaving the eager public nothing better for the investment of its money than Barnato companies. Such greed and selfishness has been thwarted, and most properly by our London contemporary. In a single paragraph it has drawn away the veil, and announces that a stock company rich in capital and titled directors has been formed for the purpose of exploiting a curious and valuable concession obtained after much difficult negotiation from the Sultan of Turkey. Here are the details:

As everybody is aware, vast numbers of inconvenient young ladies have to be put out of the way in Abdul Hamid's realm each year, and it is no less a matter of common knowledge that the favorite and most common method of accomplishing the painful but necessary duty is by administering powdered diamonds, concealed in thick, black coffee. A few doses of this poetic mixture prove quite as effective for the removal of superfluous feminity as were the bowstring and sack, instruments once popular, but now reprehended by the more progressive Turks as tending, in the long run, to make navigation in the Bosphorus difficult if not impossible. For years, now, the diamond-dust expedient has been used in all Constantinopolitan families of any pretensions to good taste or public spirit, and, as a consequence, enormous quantities of the precious powder have accumulated in the cemeteries of that capital and in several other Turkish cities, where the fashions of polite society are followed.

Test shafts have been sunk in several of these cemeteries, and in each instance the prospectors reached, not far below the surface, a stratum of earth rich enough in diamond dust to yield large returns when treated by those delicate methods with which modern science has practically revolutionized the mining industry.

These preliminary investigations were made with great secrecy, but with not less thoroughness, and as soon as the feasibility of rapidly and easily acquiring great wealth was assured the enterprising Britishers proceeded to obtain control of the deposits. This, of course, took much time, diplomacy and money. Palace officials are expensive, and popular prejudice in Moslem countries against the disturbance of graves is strong, but every difficulty has been overcome at last, and, with the concession in their pockets, the directors of the new company have ordered the construction of such machinery as may be necessary for the prosecution of their work.

No stock has yet been placed on the market, but it is understood that a good deal of it has been sold by the original holders. They were, it seems, unable to refuse the offers made to them by would-be investors, and, for the sake of ready money, were short-sighted enough to decrease their holdings in an enterprise from which the ultimate profits are simply beyond calculation.

It seems to us that the London paper has done well to make this matter public. The tendency to monopolize advantages in which all should share cannot be too firmly repressed.

WOODEN SHOES.

There Is an Increasing Demand for Them in This Country.

Philadelphia Inquirer.

Some months ago the newspapers printed an account of the growing business done by a factory in Northwestern Pennsylvania operated by Hollanders, where wooden shoes are made. It surprised the readers of the newspaper item to learn that there was a market in America for the wooden shoe in such general use in the rural portions of Holland. From a Grand Rapids, Mich., letter it appears that this market is a growing one. In that place there is also a wooden shoe factory and the product of 300 pairs a week finds a ready sale.

The letter says that Americans are rapidly coming to the conclusion that in adopting wooden footgear the Dutchman showed good sense. Americans are discovering that wooden shoes are especially desirable for work in laundries, breweries, stables and on the farm when the ground is wet, which in these latitudes is pretty much all the time from autumn to spring. The advantages of the wooden shoes are said to be that they do not become saturated with moisture, never get out of shape, are warm, comfortable and cheap, and will outlast several pairs of cowhide boots, and at the door can be readily kicked off for slippers, thus leaving barn-yard and stable odors and the mud of the fields outside of the house.

Wooden shoes are now said to be shipped to all parts of the United States at prices ranging from $1.80 to $3 per dozen. There are also several wooden shoe factories in Iowa and New Jersey. It begins to look as if the wooden shoe would soon be another of a number of American institutions due to Holland.

WELL-GUARDED GOLD

A DEATH-TRAP TREASURE ISLAND IN BERING SEA.

Fierce Monsters That Have Defied Prospectors—Terrible Stories of Survivors of Expeditions.

Boston Transcript.

Strange it may seem, but nevertheless it is quite true. Twice within the past two years the island of St. Matthew has come forcibly to my notice. The first time was in July or August, 1893, in San Francisco. Learning that the whalers were coming in from their lengthy cruises, I sauntered down to the water front to inspect them. Later on in the afternoon I was fortunate in making the acquaintance of a young captain, fresh from the ice fields. Among the various experiences detailed by him was an adventure which occurred on the almost wholly unexplored island of St. Matthew. This barren spot is a long, narrow strip of land in the center of Bering sea, is about 140 miles distant from the Alaskan mainland, and is at least one hundred miles from land in any direction. Its location is 60 degrees 18 minutes north, and 170 degrees 4 minutes east of Greenwich.

It is now quite four years ago since a whaling bark, cruising around here in search of whale, sighted the island and sent several boats' crews ashore for a supply of fresh water. Little was known at that time of the island, beyond that it lies directly in the course of the whalers homeward bound from the Arctic, and hence a region to be avoided. The boats landed on a part of the northern coast near the eastern end of the island. Some of the men began filling the water casks, and others wandered up a small stream flowing down through a diminutive canyon to the coast. They had not gone far, however, when they were met by a large number of polar bears. These savage brutes, resenting the intrusion of their domain, at once got a "move" on the Jack tars for quite a distance, when all hands turned and endeavored to hold the monsters at bay. Shots were fired from revolvers and large stones hurled from rocky peaks, but all in vain. Eventually the men were compelled to take to their boats and desert the water casks.

In due course the whaling bark in question reached her destination. The adventure was related, and at the same time several bits of stone, brought from the island as souvenirs of the northern seas, were produced. The gentleman into whose hands these were placed for inspection chanced to be an experienced miner, who immediately pronounced them to be pieces of quartz very rich in gold. Soon the story spread until it became generally known among the members of the whaling fleet, when many a longing glance was cast toward the rugged outlines of St. Matthew by the ships' men returning home from their cruises in the Arctic.

A DISASTROUS EXPEDITION.

Thus matters went on till two years ago. A revenue cutter made some soundings along the northern coast of the treasure island, and found a good anchorage in nine fathoms of water. But no attempt was made to explore the interior, as the rugged nature of the land and the great number of polar bears that stalk the miniature valleys made it an extremely dangerous task. However, it was guessed that the island has an area of some 160 square miles. Its length was believed to be about thirty miles, with a mean width of not more than five or six miles.

The cutter had scarcely departed when a sealing schooner arrived for the ostensible purpose of putting men ashore to hunt for bears, but in reality to search for gold. A strong hut was built on the beach not far from the anchorage found by the previous craft. This was stocked with provisions sufficient for the needs of five men for a period of several months. All being satisfactorily arranged, the schooner sailed away on her cruise, leaving the men who were to search for gold to reconnoitre the scene that was to be their home for an indefinite time.

What really occurred during the following months will perhaps never be revealed. The sole survivor of the ill-fated band had his reason so shattered by the terrible experience through which he passed that he could give no satisfactory account of what transpired after the vessel had sailed away. His rescue happened in this way: A small bark passing down to the coast of the island enabled the lookout to see a white flag floating from the roof of the hut on the beach. A boat was at once sent ashore, and a short search revealed the man barricaded within the frail structure. He was in a half demented state, and now and then muttered about his lost comrades. A search party was at once organized, but, although they spent the greater part of the day in their quest, no trace of the missing men could be found. At length the sick man was taken on board and the vessel passed on to her destination.

In the course of a few days the invalid recovered somewhat and told his story. Soon after the departure of the vessel which had brought him and his comrades to the island the bears discovered their presence and swarmed about the hut in such numbers that the lives of the inmates were in constant peril. Now and again a fire was kept up, but the beasts seemed to increase rather than diminish in number. Excepting quick journeys to the water course near by they were kept close prisoners for seven or eight days. The uncertainty and confinement at length became unbearable. Four of the prospectors decided, come what might, to start up the valleys, leaving one of their number to guard the provisions in the cabin. They set out at dawn one morning and returned in the evening with many quartz specimens incrusted with visible gold. Elated with success, they started out again the next day, but never came back. That was the last ever seen or heard of them.

For two and a half months the solitary prospector was, in the main, imprisoned in his hut by his four-footed foes, and the terrible experience, together with the mystery surrounding the fate of his comrades, told on his mind to such an extent that when found and rescued his reason had almost deserted him.

But there is still later intelligence of another fatal trip. About the middle of February this year a small schooner sailed from San Francisco, carrying, besides her crew, a band of eight men. They had with them the necessary provisions for several months, a plentiful supply of arms and ammunition, and all the needed paraphernalia for gold hunting, and, more, the necessary timber for the erection of a strong hut. Thus equipped they looked forward with impatience, until at length one bright morning they sighted the island, and later went ashore. The vessel, having deposited her living and other freight, set sail and departed, the captain promising to call upon them on his return.

No time was lost. The men at once went about their respective duties and before sundown a strong cabin stood in the shelter of a massive, rugged rock. Casks were then filled to overflowing and a large fire erected hard by the door of the hut. By nightfall all was in readiness, and the hunters, sitting down to the evening meal, awaited the coming of the enemy.

A TERRIBLE EXPERIENCE.

They were greeted sooner than they anticipated. For very soon the hillside and the lower slope appeared to be alive with numbers of strange, ghostly things. At present the flame of the fire was holding them at bay, but it could not do so much longer, owing to the scarcity of fuel. The hunters, realizing this unfortunate circumstance, took up their rifles and banged at every object in the shape of a Polar bear. But it could not last. The fire went out, and the enemy, quick to note this fact, shuffled down the hillside and forced the prospectors to retreat to the shelter of the cabin.

Throughout the night the suspense to the inmates was horrible. The monsters were sniffling and scratching on all sides of the structure. At other times a crash on the roof, threatening to stave it in, would tell them of the arrival of additional forces, and at other periods the groaning of the walls suggested that, with a little more rough handling they would topple down. Thus, excepting to sally out and fire shots in the broad daylight, they were kept imprisoned for five or six days.

At length they awoke one morning to find the enemy gone. Leaving one man at the hut to act in the capacity of cook the whole band set out up the small valleys to explore. On rounding a bend in the river's course, all intent in their quest of the "yellow," they were suddenly attacked by a number of the ferocious bears. They seemed to spring up from the bowels of the earth on all sides, and, before they could be either killed or dispersed, bore two of the prospectors to the turf in death.

Returning to camp with their lifeless burdens, the hunters were further dismayed. The cook was missing and a bear shuffled about the interior of the hut. It is needless to state that they filled the carcass full of holes. A search was at once made, but with no happy result. Nothing was ever seen of their comrade again.

After this, as the days rolled by in peace, the men gradually relaxed their vigilance and set about prospecting in a more businesslike way. One morning they went out in two parties. Two of the band started in one direction and the remaining three in another. They hoped thus to economize time, their object being to find some suitable spot where later all might work together. Vain hope. They were never to meet again. Towards sundown the larger company returned to camp, tired, but happy in the knowledge of having found an alluvial patch. But as the hours wore on and their comrades came not they became anxious and went in quest of them. Daylight the next morning found them still out searching the valleys; night came on the scene and still they hunted. But nothing of the missing men was ever found.

The island seemed full of mystery—nothing less than a veritable death trap. A gloom only too terrible crept over the hunters, and they decided to go back to civilization as soon as some vessel should come within hailing distance and speed them over the waters. The chance was soon afforded them. A few days later the schooner that brought them hither arrived in the anchorage, and at once sent a boat ashore. The hunters, with their outfit, were taken on board, and the vessel sailed away. They arrived in San Francisco the middle of September.

Thus the gold fields of the island are still as much a mystery as they were years ago, and to all belief it is still a barren spot, a speck upon the ocean, and a place to be shunned by ships frequenting the Bering sea.

LITERATURE TO ORDER.

Notes Made by a Writer Who Visited a London Factory.

St. James Gazette.

The writer of this article had an opportunity of inspecting one of the factories where "literature" of the "dreadful" order is turned out wholesale. The factory in question consisted of a small, low-roofed room situated in one of the many courts adjoining Fleet street, London. Five flights of rickety stairs had to be climbed before the workshop was reached. The room was badly ventilated and reeked of the odor of stale tobacco. A long deal table, covered with the picturesque ornamentations of various ink stains, and four more or less dilapidated chairs, comprised all the furniture.

Three of the chairs were in use, and their occupants, seated at a table, were writing at full speed. In front of each writer were paper, pens and ink, while at his elbow stood a pewter pot at which he took a pull as each page was completed and thrown quickly aside. The owner of the fourth chair, to whom the writer of the article was indebted for the introduction, took upon himself the duties of host and explained everything.

"You see," he said, "there are four of us; we rent the room among us and divide the proceeds of our work each week. How much do we make? Well, not very much, because this is about the worst paid of any kind of journalistic work. The usual rate of pay for our stuff is from 3s 6d to 4s per 1,000 words, and a story may be anything from 20,000 to 30,000 words long. If we could get the work to do it would be easy for us to turn out 100,000 words in a week. Of course, 'penny-a-lining' is more remnuerative, but not nearly so certain; besides which, that line is more than overcrowded.

"We divide the work up here. I myself do all the plots, such as they are; another does the school stories; a third, the Wild West and Indian yarns; and the fourth, those dealing with naval or military life. As far as the stuff goes itself, the pay is good, but it is quantity, not quality, which is required. The publishers do not want high-class literature; they must have a thrilling blood-and-thunder story for boys, and they care not how badly it is written. Plenty of strong incident, startling situations, hair-breadth escapes, following quickly one after the other, put into language full of strong adjectives.

Scarcely any plot is required, merely a thread running through the story, on which we string adventures like beads. The threads are all very similar. The hero goes abroad in search of immense treasure, or else devotes his life to discovering the murderer of his father; and, chapter after chapter, he performs marvelous feats of skill and daring, until the last one, in which the villain is killed and all ends happily. My part of the work is arranging the thread and incidents. There is nothing original about either. I get my plots from where I can, and the publishers know that they cannot expect originality for the price they pay.

"I have heard it said that a man writes best about that of which he knows nothing, and my experience proves it. For instance, the man who does our sea stories—and pretty good stories, too, of their kind—was never out of London in his life and has, therefore, never seen the sea. He possesses a dictionary of nautical phrases, and slips them in haphazard. I don't suppose the majority of his readers know any more about a ship than he does. The same remark would apply almost equally well to the writer of our Indian stories, who has certainly never been out of this country.

"When the Wild West show was over here he went to see it, and was greatly surprised. Though he had been writing stories of redskins for over three years, yet he had not the faintest idea of their real appearance. The third man, however, is different. He is a public man, and a cut above this kind of work, though he is past doing anything better now. Once he was a rising author, but his first success ruined him. I dare say you would recollect his name if I mentioned it. His stories are not so good as the others, because his education prevents him from getting down to the level of his readers.

"His history? I can give it to you in one word—drink. Who buys all these books? Boys, of all sorts and conditions. There is an enormous demand for this class of publication. Personally I think they are exceedingly injurious, for they fill a boy's mind with utterly wrong and pernicious views of life. Almost every day one sees in the papers cases where boys whose imaginations have been fired and aroused by these books have been led to commit crime. They run away from home with the notion of becoming a prairie scout or a pirate captain, and generally steal the money to start them in their new career. Perhaps you may say that my practice does not agree with my opinions. That is true; but if I do not write them some one else will, and I must live."

HIGH-SPEED RAILROAD TRAINS.

They Can Be Run More Cheaply by Electricity than by Steam.

Cassier's Magazine.

If we wish to obtain higher speeds on railroads we must employ more power in proportion to weight than we now have at our disposal with the modern steam-driven locomotive. In order to greatly increase the power it is necessary that the source of energy should be stationary and the energy transmitted to the moving train, and the only practical way of accomplishing this on a large scale is by employing electricity. An electric engine may be made to develop almost any amount of power and still be well within the weight and bulk of an ordinary locomotive. In regard to the question of supplying a long road with a powerful high tension current I would say that when trains are propelled by steam it is necessary to employ a large number of separate steam engines. Why, then, should there be any objection to using a large number of steam engines for an electrical railroad? It certainly costs no more to run a stationary engine than a locomotive engine and the engines for suppyling the current could be placed at regular intervals along the line. The tension of the current might be, say, from 2,000 to 5,000 volts. The main conductors could be thoroughly insulated and protected from atmospheric influences. The actual rubbing surface, transmitting the current to the moving train, should be in relatively short sections and connected to the main conductor only while the train is actually passing, the latter being provided with suitable apparatus for switching the current in ahead of the train and cutting it out after the train had passed. In this manner there would be very little loss of current even if at a very high tension, and nearly all danger of accidents would be avoided. With the present steam engines it is necessary to use the very best quality of coal, costing at least twice as much per ton as the cheap coal. A locomotive steam engine has of necessity to be a high pressure, noncondensing engine and the exhaust steam has to be discharged against considerably more than an atmosphere of pressure, because it has to be employed for inducing the draught. Moreover, for reasons before stated, a locomotive engine must be limited in size. A stationary engine, however, may be made of any size. It may be a compound condensing or a triple expansion engine. Large boilers may be employed, having a very large heating surface in proportion to the coal consumed, and the grate surface may be of any size, so that a very cheap coal may be employed. In this manner the cost of developing a given horse power costs 60 per cent. less than it does on the locomotive.

How Lincoln Learned Grammar.

McClure's Magazine.

"I have talked with great men," he (Lincoln) told his fellow-clerk and friend, Greene, "and I do not see how they differ from others." He made up his mind to put himself before the public, and talked of his plans to his friends. In order to keep in practice in speaking he walked seven or eight miles to debating clubs. "Practicing polemics" was what he called the exercise. He seems now for the first time to have begun to study subjects. Grammar was what he chose. He sought Mentor Graham, the schoolmaster, and asked his advice. "If you are going before the public," Mr. Graham told him, "you ought to do it." But where could he get a grammar? There was but one, said Mr. Graham, in the neighborhood, and that was six miles away. Without waiting further information the young man rose from the breakfast-table, walked immediately to the place, borrowed this rare copy of Kirkham's grammer, and before night was deep into its mysteries. From that time on for weeks he gave every moment of his leisure to mastering the contents of the book. Frequently he asked his friend Greene to "hold the book" while he recited, and, when puzzled by a point, he would consult Mr. Graham.

Lincoln's eagerness to learn was such that the whole neighborhood became interested. The Greenes lent him books, the schoolmaster kept him in mind and helped him as he could, and even the village cooper let him come into his shop and keep up a fire of shavings sufficiently bright to read by at night. It was not long before the grammar was mastered. "Well," Lincoln said to his fellow-clerk, Greene, "if that's what they call a science, I think I'll go at another." He had made another discovery—that he could conquer subjects.

SOME GEORGIA RUINS.

Ancient Fortifications of Which There Is No Certain History.

New York Post.

Lying at the end of the Appalachian chain are the Cohuttah mountains, dividing the counties of Murray and Gilmer in Georgia, and extending northward into Tennessee. There are a number of tall peaks along this range, one of the most prominent being Fort mountain, overlooking the Aileeculsa valley.

The early settlers, in searching around for gold and silver, found a rich ledge of silver-bearing galena half way up the side of this mountain, and, pursuing their investigations, they reached the summit, which is a broad plateau, with sheer precipices on every side except the southern, where they found some remarkable fortifications in a fair state of preservation. On the north, east and west the cliffs rise abruptly from the valley below to a height of over 1,100 feet, the plateau at this point being about a half mile wide. From the edge of the cliff on the east to the lip of the precipice on the west the wall had been constructed of the rough bowlders of the mountains, about ten feet in height, where it was nearest complete. The wall was built in a zigzag, "Jacob's ladder" fashion, and there were embrasures and loop-holes as if for defensive purposes.

The pioneers could gain no information from the Indians as to when, by whom, or for what purpose these fortifications were erected. They had no tradition as to the builders, and the intent and purpose of the mountain fortress was then, as it is to-day, a mystery. The walls remain standing, but near the mountainsides they have been broken by people rolling stones over the cliffs for amusement, to see them tumble down the valley.

There are large trees springing up through the ruins all along the line of the wall, and one of the strangest features of the fortifications is the roadway leading from about the center of the line to a never-failing spring that bursts up in the middle of the plateau. Instead of including the water within the fortified area, although it is within sixty yards of the ancient gateway, they left it without and built a paved way to it, guarded on either side by pits, presumably to shelter the men who guarded the approaches. This roadway is still clearly defined, and the spring wells up and its outlet forms a brook that runs down the mountainside, never failing even in seasons of greatest drought.

Many conjectures have been made as to the purpose of this fort and its builders. Some years ago a party of prospectors discovered an abandoned shaft right under the brow of the precipice on the north. In it were found traces of gold-bearing ore which the assayers pronounced rich in the precious metal. It is so nearly inaccessible, however, that no efforts have been made to work the mine. It has been supposed by many that the fortifications were built by De Soto's men, who discovered the mine and worked the shaft. With a precipice more than one thousand feet high on three sides and this formidable rock wall on the fourth, they could easily repulse the advance of an enemy and prevent interference with the work. The only way by which they could have operated was by letting the miners down to the shaft from above; once there they would be free from interruption. This belief has been strengthened recently by the finding of a Spanish silver coin under one of the stones by a party who had turned it over through idle curiosity. The coin is about the size of a 25-cent piece and bears a date of the reign of Ferdinand and Isabella.

On the stone are roughly cut letters, or rather hieroglyphics, for nobody has been found to decipher them. In the valley below has been found the site of the ancient furnace of a smelting works, evidently built for the reduction of ore. It is near a stream of water, and in cultivating the land a large amount of slag has been uncovered. All these facts put together seem to indicate that the old fortress was built to protect the Spanish miners in their search for gold and silver.

On the other hand, there are those who hold that the fortress enclosed a temple or shrine, and was the work of a race that inhabited the country prior to its occupancy by the Cherokee Indians. On the borders of the Coosawattee river, a few miles away, have been found tumuli which, when excavated, revealed human remains that were buried in a manner more like the Aztecs than that of the Indians common to this section when the country was discovered by the white men. The ground was first levelled and a smooth slab of sandstone was laid flat on the hard-packed soil, and four similar slabs were set edge up on this, making a rude box. The body was then dismembered and placed in this box, in a sitting posture, with the arms and legs around it and the severed head on top of the pile. Some of these dismembered skeletons indicate that those who were buried there were giants in their day. One of the thigh bones reached almost to the hip of an ordinary man, and the jaws were massive and the skull indicative of superior intellectuality. Strings of beads made of human teeth were also found among the crumbling remains in a wonderful state of preservation and polished as if by long wearing.

How long the bones had been entombed there no one can conjecture. Upon exposure to the air they crumbled at the touch, and there was no means of preserving them for examination by the archaeologists. Many believe that a branch of the great Aztec family inhabited this region prior to the coming of the Cherokees, and that these vast tumuli were the work of their hands.

Not far from these ancient graves two women, one of them a school teacher, were out for a stroll along the Coosawattee river a short time ago. Growing weary, they sat down on the bowlders at the foot of a steep cliff to rest. There had been a storm and a rise in the river a few days before and a great oak tree had been blown down on the margin of the stream. The schoolmistress saw a bright-looking object lying near the uprooted tree, and, picking it up, found that it was a curious coin. Rubbing off the dirt, she found that it was gold, and the two, by digging in the sand, unearthed seventeen others, all of them bearing dates a hundred and fifty or two hundred years ago.

They reported their find and a crowd of men repaired to the spot and continued the search, but found no more coins nor anything else that might indicate how they came in that out-of-the-way spot. The coins were sent to a collector in Atlanta, who purchased them for a trivial sum. They were of Spanish origin, and the supposition, by what can be learned from the fragmentary accounts of the wanderings of De Soto, is that some of his men buried them there while rambling among the hills in search of the rich mines that supplied the Cacique of Echota with his treasure.

This section of country is away from the traveled routes, a distance from the big towns and railroads, and has heretofore been deemed well nigh inaccessible. It is peopled by a rough and hardy race of mountaineers who care little for scientific investigation, and in whose hands the rarest relics might fall and be thrown away as if of no interest or value.

A Millensial Exposition.

Hungarian-American Magazine.

The commemoration of Hungary's thousandth anniversary will begin May 2, 1896. The central scene of the celebration will be in Budapest, but its ramifications are to extend over all the kingdom. The government has given enthusiastic attention to the task of making the time one unexampled before the world for the variety, the magnitude and the beauty of the exposition, while the people as a whole have entered into the work with unrivaled energy and spirit. The enormous labors which have been, and are to be, expended for the observance of this anniversary are not designed for transitory purposes merely. It is intended that the exposition will give the world an understanding of Hungary, such as was not before—a knowledge of her arts, her literature, her industries, her resources in all directions. But, in addition to this, the occasion is to be made memorable by the erection of buildings, the construction of bridges, educational improvements, and the establishing of a multitude of utilitarian movements throughout the length and breadth of the land.

OF THE LOCOMOTIVE

A MACHINE WHICH EXERCISES A FASCINATING INFLUENCE.

Details of Its Construction and Operation Told in Language That All Can Easily Understand.

Chicago Record.

Down grade, a clear track, an easy siding seven miles ahead, No. 2 out of the way, seventy pounds of air, twenty empties and a caboose behind, the fireman on the footboard polishing the hand-rail and throwing rapid-transit kisses to the pretty girl on the fence; a fresh pipeful of tobacco, a bright, crisp morning, steam shut off, the locomotive sliding down the slant with only the noise of rumbling machinery and the rush of sixty-five tons of metal, and breakfast but half an hour off, are conditions which fill the heart of the engineer in the cab with a rapturous love of life and movement. Like an enomous toboggan the freight train glides down the incline, swaying and creaking, jolting and jumping on the curves, but not a puff or hiss from the engine. Then comes the drone of the whistle, the grinding of the brakeshoes on the wheels as the air is put on, three or four impatient yaps from the locomotive, a switch is thrown, and the magnificent machine draws ahead slowly and with dignity on to the siding.

It was an old engineer who said, patting the great driving wheel: "Electric motors may take the place of steam locomotives some day, but they never will be as handsome."

He spoke from his heart, for to the engineer and fireman a locomotive is the greatest, the most magnificent, the finest, the most intelligent and nearest approach to a human being in the mechanical world. The engineer speaks of his engine as "her." He encourages her, and chides her, and sometimes swears at her when she is "cranky."

He protects her from stiff joints with the finest of lubricating oil; she is fed with the best of coal, and bedecked with brilliantly polished brass and copper fittings. He watches over her with a jealous guardianship and humors and caresses her constantly. He is sad when she does not reciprocate his affection and lauds her with unstinted praise when she is good.

This entausiasm of the engineer is shared to some extent by every man who stands beside a locomotive. It is fascinating to the average admirer because it is mysterious. The beautiful proportions and massive construction excite admiration because they appeal to the eye, but the rods, pipes, valves, link motion, bell cranks, levers and other parts of its anatomy are beyond the common understanding.

WHAT THE LOCOMOTIVE IS.

Yet a locomotive is but two stationary engines mounted on wheels, which also carry the boiler, fire box, pump and attendants. If anything, it is more simple in construction than some of the triple expansion or compound Corliss valve engines which are bolted to foundations in a machine shop or a great factory. There are thousands of stationary engines equipped with reversing gears almost identical with those used on a locomotive, and the steam valve of a locomotive is a simple sliding valve.

The locomotive consists, first, of its boiler, which is solidly attached to the two steam cylinders in front. The cylinders are bolted firmly to the frame of the running gear. The back part of the boiler stands between and over the driving wheels, and over it is the cab, which protects the engineer and fireman from the weather.

The furnace, or fire box, is part of the boiler, in that it is not a separate and outside furnace, and the sides of the furnace are formed by the water legs of the boiler, which come down to below the grate bars. This gives the rear end of the boiler a shape like a key hole.

The hump or dome on top of the boiler nearest the engine cab is the steam dome, and from this dome the dry steam is taken to the steam cylinders through a pipe which passes through the boiler and divides into two pipes under the smokestack. That part of the boiler which begins under the smokestack and extends to the pilot, or "cowcatcher," is called the "smoke box," and in it is a wire netting which catches the sparks and cinders.

The "exhaust" steam from the cylinders passes up through an exhaust pipe which does not quite reach the bottom of the stack inside of the smoke box, so that the steam, forced out of the exhaust in puffs, makes a strong draft which sucks the air through the grate bars in the bottom of the fire box to perfect combustion.

In the dome end of the steam-pipe which conveys the steam from the dome to the cylinders is a valve, which is opened and closed by a rod that passes back to the engine cab. This is the "throttle valve," and when the engineer says that he "has thrown her wide open" he means that he has pulled back the "starting bar" so far that the valve in the dome is opened as far as it will go, and the cylinders are getting all of the steam that it is possible to give them. The engineer keeps his hand on the lever of the starting bar, or, as it is commonly called, the "throttle." The lever which comes up, almost touching his knee, is the reversing lever. It is similar in design, but much more finished in workmanship and of handsomer proportions, to the grip lever in a cable car.

At its lower end it is held by a steel pin to the frame and moves back and forth. An arched piece of flat steel with notches cut in the upper edge, called the "sector," is used to hold the reversing lever in any position desired, for a steel tongue, raised and lowered by a lever which extends down the handle of the reversing lever, fits into the notches and thus holds the reversing lever. The reversing lever moves the "reach" far back and forth, and the reach bar is connected with the link motion.

The link motion is a device by which the engineer can let steam in at either end of the cylinder and thus start his engine ahead or reverse it. This is done by two eccentric rods, the "forward" and "backward," which by suitable mechanism that must be seen to be understood, actuate the sliding valve in the steam chest.

By throwing the reversing lever forward the valve gear is so adjusted that the steam enters the cylinder so as to move the engine forward; by throwing the reversing lever back the opposite effect is secured.

A locomotive moves over the smooth steel rails because of its "tractive" force. This traction is increased by increasing the weight over the driving wheels. The friction between the tires of the drivers and the steel rails causes the wheels to grip the metal, and as the rails are immovable, the wheels must go around.

The steam, by pressure and expansion, forces the piston in the cylinder to move. The "piston rod" is connected with the "cross head," which moves back and forth between the "guide bars." The connecting rod transmits the motion to the drivers, and the drivers, revolving, move the engine.

It is sometimes necessary to increase the friction between the drivers and rails, and this is done by throwing dry sand on the rails immediately in front of the driving wheels. On some locomotives the sand box is perched on top of the boiler, and a rod from the engine cab opens the sand valves, one for each side of the engine, and the sand falls down through pipes to the rails.

OTHER POINTS OF THE MACHINE.

Steam cylinders require oil for lubricating purposes, and this oil is fed to the steam valve through a pipe which passes from the cab through the boiler, so that the oil is not affected by the cold air. As soon as steam is shut off from the cylinders they grow cold and the steam condenses to water. This must be drawn off, and the engineer in his cab, by pulling a rod, opens the "cylinder cocks" and keeps them open until the sound of the escaping steam tells him that nothing but dry steam is passing through. It is when the cylinder cocks are open that the flying locomotive sends out jets of steam to the right and left.

In the tender of the locomotive, which is entirely separate from, although a part of, the locomotive, the coal and water are stored. The water is kept in the tank which forms the sides and back of the tender, and the water, brought from the tank through a feed pipe, is forced into the boiler through an injector.

The fireman, with a large scoop shovel, feeds the ravenous maw of the locomotive with coal. A chain is hooked to the furnace door, and when the fireman slides a scoopful of coal over the iron floorplates to the door he pulls the chain, the door opens, the coal is dumped into the firebox and the door is slammed shut at once, for no fireman likes to let cold air enter his firebox over the fire.

The careful fireman does his work on the principle that slow combustion is the nearest to perfection because it makes less clinkers and saves fuel and labor in cleaning. He keeps his fire bright and has no "cold" corners, and keeps his fire even so far as thickness of burning coal is concerned.

It is his duty to keep steam up and the boiler supplied with water, help the engineer to look out for signals, oil up, keep the cab clean, ring the bell and throw coal at tramps who may be stealing a ride on the front platform of the mail car.

The invention of the automatic air brake relieved the engineer of a great deal of worry and nerve tension, for, by a slight movement of the handle of the "engineer's" valve he can apply the brakes on every car of a train equipped with automatic air brakes.

In a short time the old familiar whistle "down brakes," which sends a train crew galloping over the tops of freight cars to wind up the hand brakes, will be heard no more, for every railroad in the country is equipping its freight cars with automatic air brakes, thus giving the engineer as much control over a hog train as he has over the "fast mails" and "limited throughs."

Standing in a vertical position on one side of a locomotive is the air pump. It compresses air into a main reservoir tank, which generally is placed under the front end of the boiler. From this line a pipe leads to the engineer's valve in the cab, and from this valve the air is admitted to the main air pipe, which extends under the train. The air in this pipe is kept at a pressure of about seventy pounds to the square inch.

Before the train leaves the station the auxiliary air reservoirs under each car are filled with compressed air, and this air is passed into the brake cylinders whenever, from any cause whatsoever, the pressure in the main air or train pipe is decreased. The engineer sets the brake by letting some air out of the train pipe.

If he is approaching a station he lowers the pressure gradually, thus applying the brakes by degrees, but if he sees the headlight of another locomotive coming toward him on the same track he applies the emergency stop by opening the valve slide, and this sets the brakes so "quick and hard" that the passengers are "brought up standing."

In the engine cab are steam gauges and air gauges, gauge cocks for ascertaining the level of the water in the boiler, a water glass for the same purpose, levers for opening the safety valve, a cord for ringing the bell, a clock and generally a number of photographs of pretty women, while under the cushions in a box are tools of all kinds and descriptions, the always present lunch box and the soap and towels which the fireman and engineer use when they wash up after a run.

MAY YET BE AN EMPRESS.

The Only Daughter of the Late Crown Prince of Austria.

New York World.

Archduchess Elizabeth, the twelve-year-old only daughter of the late Crown Prince Rudolph, of Austria, took her first communion in the chapel of the imperial palace in Vienna a few days ago. At the conclusion of the ceremony the little Archduchess walked up, not to her mother, but to her grandfather, to whom she is passionately attached, and who bent down and clasped her in his arms.

Archduchess Elizabeth, "Our Little Woman," as the Viennese fondly call her, is, in spite of her tender years, the most popular member of the reigning house, with the solitary exception of the Emperor. The Austrians and Hungarians in general, and the Viennese in particular, seem to have transferred that affection which they manifested towards "Unser Rudi," as they were wont to style the late Crown Prince, to his little daughter. By his will she is made the ward of her grandparents, no mention being made of his wife. And the Emperor has accepted the trust in the fullest sense of the word.

Rudolph's widow, Stephanie, whom nobody likes, spends at least nine months of the year in foreign travel, exciting comment of no pleasant character by her extravagant behavior, flighty conduct, cynical utterances and thoroughly frivolous and undignified behavior at Monte Carlo, at Spa, at Cowes and elsewhere. During these absences it is the old Emporer and, in a minor degree, his consort who fill towards the little girl the places of father and mother. He finds time to supervise her lessons and inspect her copy-books and her tasks, and it is her grandfather to whom she is accustomed to look for all those manifestations of paternal tenderness which every child craves. The Empress, too, is very kind to her whenever she is in Vienna, while the other members of the imperial family vie with one another in trying to soften any sorrow that the child might feel by reason of her mother's attitude.

If, as asserted by the historian, Hormayer, the signatures of the "Pragmatic Sanction" were forged, and, as is admitted in the Legislature, as well as in the semi-official press of Pesth and Vienna, that no trace of the document can be found in the state archives, the little Archduchess Elizabeth, as only daughter of the late Crown Prince, is heir to the throne of Hungary. The Pragmatic Sanction was supposed to provide for the succession of a woman to the throne of the dual empire only in the event of there being no member of the male dynasty left alive. But if this sanction does not exist then the old laws of succession must, as asserted by Kossuth, be considered as still in existence, and they provide for succession according to seniority in the direct line, no matter whether the heir is male or female.

There is no doubt that little Archduchess Elizabeth would be infinitely more welcome to the Hungarians as their sovereign than the Emperor's brother, Archduke Carl Ludwig, who for the past ten or fifteen years has opposed the liberal reforms and popular privileges that have by degress been accorded to the Magyar nation by the Emperor Francis Joseph. And his sons are little better than he. The elder of the two, Francis Ferdinand, is dying of consumption in Egypt; the other, Archduke Otto, is renowned as being the biggest blackguard of old-world royalty, even the disreputable ex-King Milan of Servia being a high-bred and honorable gentleman in comparison. So great indeed are the disadvantages presented by the possibility of the advent to the throne of either Archduke Carl Ludwig or of his son, Otto, that Emperor Francis Joseph has persistently refrained since Rudolph's death from giving the slightest countenance to the rumors and reports referring to his brother and his nephews as heirs-apparent, and within the past fortnight he has given serious indication of his intention to avail himself of the power which he possesses to bar them both from the succession.

HARDWARE NAMES.

Derivation of Names of Articles in Common Use.

Hardware.

So accustomed does the hardwareman, long in the business, become to the names of his wares, that he is not much given to speculation upon their derivation.

If the question should arise in his mind, it is dismissed with the reason that it was so named when made, possibly hundreds of years ago—just as he was named John when he was born.

This does not satisfy the younger aspirants for hardware lore. "If," say they, "you were named John—why John?"

To satisfy this demand the following "Whys" have been collected:

A knife was a knife in colonial times. The Pilgrim fathers had knives. Across the water the English had knives as far back as Chaucer's time, as the Sheffield Whittle testifies.

For the name, however, we must cross the English channel to France. In the thirteenth century knives were known as "mensaculae" and "artari," a little later by the word "kenivet." From which is evidently derived "canif," or knife.

In this connection it may be said that two-prong forks are mentioned for the first time in an inventory of Charles V in 1379. The table upon which food was placed was surrounded with benches or bances, whence "banquet."

To know why a two-faced rim lock is called a "janus" faced lock, we must go from the realism of the twentieth century to the ideal symbolism of ancient Greece. There, in a temple whose doors were never closed during the war, Janus, the god with two faces, was enshrined.

In the hardware store "janus" becomes a fitting name, indicating in the lock that it is the same on both sides, and in the store the alertness necessary to success in these days of commercial warfare.

In the sixteenth century Pistoles and Pistolets were so called, it is said, because they were invented at "Pistola." But on this subject etymologists differ, some preferring the suggestion that they were called pistols from the fact that the bore was of equal diameter with the "pistola," a coin of the time.

In the names anvil, stirrup and hammer we find a very curious thing—that the position is reversed and that these articles give their names to what was made long before their use was known. The three pretty little bones of the inner ear are called "hammer, anvil and stirrup."

The Profit in Plays.

New York Letter.

"Trilby" has been thought to be perhaps the finest money maker of all plays recently produced in America, except "Shenandoah," but a decision just reached by one of our courts would indicate Mrs. Burnett's play, "Little Lord Fauntleroy," may perhaps have made the record in recent years, at least for the time when its popularity was maintained. A litigation between two dramatic managers involving the rights to the profits in this play was determined yesterday by the decision of Mr. Justice Van Brunt, perhaps the last decision that this Appellate Court will put on record, since it goes out of existence to-day. The details of the litigation are not important excepting to dramatic managers, but the facts revealed by it are of interest. The testimony showed that Mrs. Burnett's play yielded a profit, New York and Boston excepted, of nearly $150,000, while the profits in those two cities were sufficient to bring the sum up to nearly $300,000. These were the managers' profits, after royalties and all expenses had been deducted from the receipts. Mrs. Burnett's royalties often were as high as $1,000 a week, and her total royalties reached about $75,000. That, too, for a play which manager after manager refused, and which was only produced as a desperate venture. It brought Mrs. Burnett an unexpected fortune, since she had no notion that it would command the almost hysterical success which characterized its production for about two years. What the profits of "Trilby" are no one knows, although there is good authority for the statement that royalties running from $500 to $900 a week were sent to Du Maurier. This play, however, has been upon the boards only about eight months.

HERE'S A NAVAL RECORD.

English Diana Built in 235 Days and a Battleship in Two Years.

Pall Mall Gazette.

Some significant and cheering words were uttered one day last week at the launch by the Fairchild Shipbuilding Company, at Govan, of her Majesty's ship Diana. The speaker was Mr. James Dunn, acting deputy naval constructor, who has been representing the admiralty at launches of government vessels in private yards during the illness of Sir William White. The Diana is a second-class cruiser of 5,600 tons and 9,600 horse power. She will have a speed of 19½ knots an hour, and will be armed with five six-inch and six 4.7 guns and eight twelve-pounders. During the luncheon which followed, Mr. Barnwell, the managing director of the company, referred to the satisfactory terms that existed between his company and the admiralty, and as an illustration of the quality and quantity of work that could be turned out by the Fairchild Shipbuilding Company, said that the Diana had been completed in 235 working days. Mr. Dunn, who represented the admiralty, made only a brief speech, but one that seemed to give great satisfaction. He said that, within as many months, he had represented the admiralty at the launch from private yards of six great warships.

This statement was loudly cheered. "In glancing over the work done in eleven months of 1895 it will be said, I think, with just pride and satisfaction," said Mr. Dunn, "that we see a picture embracing our royal dockyards and the great shipbuilding establishments such as this, the Fairfield works, which are carried on with such ability; a picture showing as an addition to Great Britain's fighting fleet

"Five new first-class battleships.
"Two new first-class cruisers.
"Four new second-class cruisers.
"Two new third-class cruisers, and
"Twenty-four well-armed, swift torpedo destroyers.

"I am inclined to say," added Mr. Dunn, when the cheers had died away, "that is a record; but record or not, it is reassuring. It is true our requirements are world-wide; that our responsibilities demand serious thought; that we have not only to safeguard that great portion of the globe known under the comprehensive term of British possessions, but we have to protect a floating world represented by eleven thousand ships of the mercantile marine, measuring thirteen millions of tons."

The vast proportions of Britain's mercantile marine caused more cheering, which was renewed when Mr. Dunn concluded with "Sufficient has been said to indicate the resolute activity of the government." It would seem from the statements made by Mr. Dunn that between the royal dockyards and private shipbuilding concerns in the United Kingdom, Great Britain could turn out a very respectable navy in a couple of years. Through the courtesy of some of the admiralty officials the press has been furnished with some stirring details of the marvelously short time occupied at Chatham in the building of the Magnificent, and at Portsmouth of the Majestic. The construction of the Magnificent within two years is said to be a record.

Acording to the information furnished, the construction of this battleship was begun on Dec. 18, 1893; she was launched on Dec. 19, 1894, and she was commissioned on Dec. 12, 1895. This is undoubtedly quick work, but unless more than one great shipbuilder is very much mistaken, there is more than one private yard in Great Britain able to do the work in as short a time as, or, all things being equal, in less time than any royal dockyard can do it. "Take the Magnificent, for instance," said one of the largest shipbuilders in the country to the Pall Mall representative, "and let us see what all that has been said about record-breaking amounts to. She was turned out of a royal dockyard, and, let us say, ready for sea in two years. There is nothing surprising in that. While she was on the stocks the yard did nothing else. Every available man was set to work upon her. At times they even worked double shifts. Besides, in royal dockyards, as much as three months' preliminary work is done before an official 'start' is made. In royal dockyards plans are approved at once, and there is none of the waiting with which private shipbuilders are so well acquainted. In building a battleship a royal dockyard gets about three months' start of a private yard. That's a good deal to begin with. Then, as I've said, they do nothing else until they launch the vessel. In a private yard a ship of the same size could easily be turned out in the same length of time with a fair start, without interfering with the other work of the yard."

LAKE NEMI'S SUNKEN MYSTERY.

A Diver's Discoveries Among the Vessels at the Bottom of the Lake.

London Athenaeum.

Various journals have, during the past month, spoken of a big mass of timber which has for centuries lain sunk in the thick mud of Lake Nemi, and archaeologists disputed among themselves seriously to determine whether it was a raft intended to float a hanging garden, or a kiosk built upon palings curved to resemble the form of a ship, but, until now, none could define exactly its shape or purpose. At last the diver employed to examine it placed on the surface of the water thirty-seven floats, fastened each by a light rope to the sunken mass at equal distances of five meters from each other, which, when drawn tight, indicated the length from stem to stern. At the prow end projected a kind of prolonged spur. Certifying by this means its configuration as a real ship, the next step was to learn if it would float easily. Lying athwart the shore, with its stern eighty meters away in deep water, it must have been a ship capable of sailing and drifting, and not a fixture. Some argued that, as it was seventy-four meters long by fourteen meters broad, such a craft could not swim or be maneuvered on so small an expanse of water, but this doubt vanishes when it is considered that Lake Nemi has a diameter at its broadest of 2,700 meters, and of 250 at its narrowest, therefore it might as well be held that a fly is unable to turn in a basin full of water. Moreover, this ship of Caligula (at first thought to belong to Tiberius) was never intended for great velocity, but simply for pleasure trips (as its luxurious trappings suffice to show), and required only space to sail within certain restricted limits. The most valuable of the fragments brought to land are deposited in the villa of Prince Orsini, at Genzano.

They consist of six uprights and beams and projecting horizontally from the ship, all magnificently worked in bronze, some circular, others rectangular, representing a Medusa's head, three lions and two wolves, in such good preservation as to appear of modern date; also a grating of bronze which was probably meant to give light to the lower deck, or to furnish support to transparent slabs of alabaster. There are large quantities of nails and plates of bronze, forming very probably a covering to the hull. The ribs, in four sections of a meter long, are of the same metal. Many morsels of mosaic and enamel in circles, besides disks and portions of porphyry and serpentine imbedded on more than 700 square pieces of terra cotta have been found, which decorated the floor and sides; round castors of bronze, used doubtless to facilitate the moving of the couches; two large metal bollards, serving evidently to secure the hawsers; lastly, many wine jars and lanterns in terra cotta. The diver, groping under water northward, clearly perceived the existence of a second ship at a distance of half a mile from the first, and thought that he could distinguish dimly a third vessel. Can it be that in the time of the empire this lake was utilized for a naval school of instruction? Two long pine beams fastened together with iron nails, found in shallower water than the imperial ship, prove plainly that the spot had been explored ages ago.

Two Christmas Gifts.

Washington Post.

This is something that happened last year—or perhaps it was the year before, or even the year before that. At any rate it's just as good to be telling as if it were brand new. There is a man here whom Mother Nature, by way of recompensing him for the loss of his sight, has richly endowed with artistic abilities. That isn't in the story, you know, but it describes the man. One day the wife of his bosom said to him:

"My dear, I've bought you a lovely Christmas present."

"Where is it?" he asked.

"There," she answered. "It's a painting there on the wall."

That evening he said to her, "My dear, I've just been buying you a lovely Christmas present."

"Indeed," said she, "what is it?"

"An overcoat," was the answer. "I have it on."